UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM 6-K

Report of Foreign Private Issuer Pursuant to Rule 13a-16 or 15d-16 of the Securities Exchange Act of 1934

Date of Report: October 31, 2016 Commission File Number: 001-36891

Cellectis S.A.

(Exact Name of registrant as specified in its charter)

8, rue de la Croix Jarry 75013 Paris, France +33 1 81 69 16 00 (Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F: Form 20-F ☑ Form 40-F ☐
Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):
Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

EXHIBIT INDEX

Exhibit <u>Title</u>

99.1 Press release, dated October 31, 2016.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

CELLECTIS S.A.

(Registrant)

October 31, 2016 By: /s/ André Choulika

André Choulika

Chief Executive Officer

Calyxt Generating Healthier High-Oleic Low-Linolenic Soybean Variety with Increased Oxidative Stability and Enhanced Shelf Life

Article Available in BMC Plant Biology

MINNEAPOLIS & ST. PAUL, Minn.--(BUSINESS WIRE)--October 31, 2016--Calyxt, Inc., a Minnesota-based company developing healthier food products to benefit both consumers and growers, today announced the publication of a study in BMC Plant Biology describing the use of genome editing technology to modulate soybean oil composition to have increased shelf-life, higher frying stability and improved nutritional characteristics.

Commodity soybean oil contains high levels of polyunsaturated linoleic and linolenic acid, which contribute to oxidative instability – a problem that has been addressed through partial hydrogenation. However, partial hydrogenation increases levels of trans-fatty acids, which have been associated with cardiovascular disease, according to the U.S. Food and Drug Administration.

Previously, Calyxt generated soybean lines that have oil with increased levels of monounsaturated oleic acid and decreased levels of linoleic and linolenic acid. As a result, the high oleic soybean oil does not require partial hydrogenation. In this study, Zachary L. Demorest and colleagues further improved soybean oil composition by editing additional genes in the soybean genome. The newly produced soybean varieties offer even higher levels of oleic acid and lower levels of linolenic acid (High Oleic, Low Linolenic) to provide greater stability and longer shelf-life.

"This study marks yet another milestone in the commercialization of gene edited foods and demonstrates that gene edited crops can provide significant nutritional benefits to consumers," said Dr. Feng Zhang, Chief Operating Officer at Calyxt. "We know that consumers are becoming more and more mindful of the foods they eat, and we are striving to bring healthier foods to consumers."

"In the past, traditional breeding techniques meant that it would take generations to be able to reduce fatty acids and achieve significant improvements in oil composition," added Dr. Dan Voytas, Chief Science Officer at Calyxt. "TALEN® technology has changed the way we think about crop breeding, and allows us to more quickly and accurately develop foods for the benefit of consumers."

Direct stacking of sequence-specific nuclease-induced mutations to produce high oleic and low linolenic soybean oil

Zachary L. Demorest, Andrew Coffman, Nicholas J. Baltes, Thomas J. Stoddard, Benjamin M. Clasen, Song Luo, Adam Retterath, Ann Yabandith, Maria Elena Gamo, Jeff Bissen, Luc Mathis, Daniel F. Voytas and Feng Zhang

BMC Plant Biology **DOI:** 10.1186/s12870-016-0906-1

To read the full article, click here

About Calyxt

Calyxt, Inc. is a fast-growing, consumer-oriented ag company that utilizes its innovative, patented TALEN[®] technology to usher in a new era of agriculture and develop crop products with healthier characteristics for consumers – all the while helping farmers and food and agriculture industries reduce their environmental footprints in the context of climate change. Calyxt believes that agricultural technologies can have a profound, positive impact on humanity and is looking to engage those who share this passion for food and agriculture. Calyxt is located in Minneapolis-St. Paul, Minn., and is a wholly owned subsidiary of Cellectis.

For further information please visit our website: $\underline{www.calyxt.com}$ CalyxtTM and the corporate logo are trademarks owned by Calyxt, Inc.

Talking about gene editing? We do it.

TALEN® is a registered trademark owned by the Cellectis Group.

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